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FACTOR ANALYSIS OF STUNTING IN CILINCING PUBLIC HEALTH CENTER NORTH JAKARTA

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Abstract

Background: According to the Ministry of Health announced the results of the Indonesian Nutrition Status Survey (SSGI) at the BKKBN National Work Meeting, where the prevalence of stunting in Indonesia fell from 24.4% in 2021 to 21.6% in 2022. Therefore, the Government of Indonesia has a target for 2024 for the stunting rate to fall by around 14%. So that the reduction in stunting rates is still far from the target set by the Government. Indonesia is still experiencing problems in nutrition and child development. UNICEF suggests that around 80% of stunted children are found in 24 developing countries in Asia and Africa. **Objective:** This study aims to determine the factors related to stunting in Cilincing Public Health Center, North Jakarta in 2024. **Methodology:** Descriptive correlation research with cross sectional research design. Population 74 respondents aged 24-59 months with purposive sampling technique. The instrument used to perform variable calculations uses a questionnaire. Variables include Immunization History, Clean and Healthy Living Behavior (PHBS), Exclusive Breastfeeding History, Parenting Patterns and Diarrhea History. This data was analyzed using descriptive statistics chi-square. **Results:** The research results showed that the number of health workers who experienced stunting was greater (68.9%) compared to normal ones (31.1%). There is an average value of stunted toddlers with a complete immunization history (56,%), good PHBS (66,2%), exclusive breastfeeding history (77%).), less good parenting patterns (51.4%) and history of diarrhea with Diarrhea (60.8%). So there is a significant relationship between the factors history of immunization, PHBS, Parenting Patterns and History of Diarrhea (p value <0.05). **Conclusion and Suggestion:** The availability of educational activities for the Cilincing Public Health Center in providing education on the knowledge of parents of toddlers about the factors of stunting incidence at the Cilincing District Public Health Center in 2024. The Puskesmas can provide education related to food diversity/variety, especially sources of animal protein.

Keywords: Clean and healthy living behavior, Exlusive Breastfeeding History, Immunization, Diarrhea, Stunting.

Introduction

Stunting is one of the problems that hinder human development globally. Currently, there are around 162 million children under the age of five who are stunted. If this trend continues, it is projected that by 2025 127 million children under the age of five will be stunted. According to the United Nations Children's Emergency Fund (UNICEF), more than half of stunted children, 56%, live in Asia, and more than a third or 37% live in Africa.[1]

According to the Ministry of Health, it announced the results of the Indonesian Nutritional Status Survey (SSGI) at the BKKBN National Working Meeting, where the prevalence of stunting in Indonesia fell from 24.4% in 2021 to 21.6% in 2022. Therefore, the Government of Indonesia has a target for 2024 to reduce the stunting rate by around 14%.[2] So that the reduction in stunting rates is still far from the target set by the Government. Indonesia is still experiencing problems in child nutrition and development. UNICEF said around 80% of stunted children are found in 24 developing countries in Asia and Africa. Indonesia is the second country in Southeast Asia and fifth in the world that has the highest prevalence of stunting children after India, China, Nigeria and Pakistan. Currently, the prevalence of stunted children under 5 years old in South Asia is around 38%.[3]

The results of Basic Health Research recorded the prevalence of stunting in 2007 which was 36.8% had dropped to 35.6% in 2010, but increased to 37.2% in 2013, briefly dropping to 21.6% in 2022. From this prevalence, it can be seen that the prevalence of stunting in Indonesia actually decreased by 2% in the period 2013-2021 or 1% per year. According to WHO, the prevalence of short toddlers becomes a public health problem if the prevalence is 20% or more. Therefore, Indonesia has a target that in 2024 the stunting rate will decrease to 14%. Therefore, the percentage of short toddlers in Indonesia is still high and is a health problem that must be addressed.[4]

According to standards, the WHO Organization identifies that the stunting rate in DKI is still quite low. Even so, by region. There are 3 cities above the prevalence of

stunting toddlers in DKI Jakarta and the remaining 3 cities are below the provincial average. Especially the first Seribu Islands is the area with the highest prevalence of stunting toddlers in DKI Jakarta in SSGI 2022, which is 20.5%. This figure increased by 1.2 points from 2021 which was 19.3%, followed by the second region with the highest regional prevalence of stunting Jakarta North with 18.5%, West Jakarta with 15.2%, East Jakarta with 14.4%, Central Jakarta with 14.0% and followed by stunting rate with the lowest prevalence in South Jakarta with 11.9%.[1]

The Central Jakarta area still faces challenges in nutrition problems (stunting). The prevalence of short toddlers in DKI Jakarta in 2021 is 20.5%. The prevalence of short toddlers in North Jakarta is higher when compared to the results of Riskesdas, which is 18.5%. According to the Data and Information Center, the highest prevalence of stunting toddlers is in Kacamatan Cilincing with as much as a prevalence value. Puskesmas Cilincing District with the number of stunting toddlers as many as 100 in August, 96 in September and 92 months, so that the sample population of stunted toddlers is 74 toddlers.

Stunting (short) or chronic malnutrition is another form of growth failure. Chronic malnutrition is a condition that has occurred for a long time, not like acute malnutrition. Children who are stunted are often seen to have a proportional normal body, but actually their height is shorter than the normal height of children their age. Stunting is a cumulative process and is caused by insufficient intake of nutrients or recurrent infectious diseases, or both. Stunting can also occur before birth and is caused by very poor nutritional intake during pregnancy, very poor parenting, low quality of food in line with the frequency of infection so that it can inhibit growth.[3]

The adverse effects that can be caused by nutritional problems (stunting), in the short term are disruption of intelligence brain development, impaired physical growth, and metabolic disorders in the body. While in the long run the adverse consequences that can be caused are decreased cognitive ability and learning achievement, decreased immunity so that it is easy to get sick, and a high risk for the emergence of diabetes, obesity, heart and blood vessel disease, cancer, stroke, and disability in old age, as well as uncompetitive work quality which results in low economic productivity.[5]

Stunting in children is a serious problem, as it is associated with a greater risk of morbidity and mortality, obesity, and non-communicable diseases in the future, short adulthood, poor cognitive development, and low productivity and income. Every year about 10.5 million child deaths are related to malnutrition problems. Where 98% of these deaths are reported to occur in developing countries.[6]

Exclusive breastfeeding of less than six months is also one of the factors that lead to stunting. A study conducted in Nepal stated that children aged 0-23 months have a significantly lower risk of stunting, compared to children aged > 23 months. This is due to the protection of breast milk obtained. Economic status also significantly affects the incidence of stunting in children aged 0-59 months, children with families who have low economic status tend to get less nutritional intake. Other studies have shown that children's health depends on the socioeconomic status of the household.[7]

According to WHO, prevention efforts in stunting can begin in adolescence. Young women can begin to be given knowledge and understanding of the importance of fulfilling nutrition as adolescents. Fulfillment of nutrition during adolescence can prevent the occurrence of malnutrition during pregnancy. Adequate nutrition during pregnancy can prevent stunted growth in the fetus conceived.[8]

In addition, stunting prevention is also focused on the First 1,000 Days of Life (HPK), namely on pregnant women, breastfeeding mothers, children 0-23 months. The 1,000 HPK period is an effective period in preventing stunting because it is a period that determines the quality of life. At 1,000 HPK children will experience a period of "Golden Period" where child growth will take place rapidly. Therefore, in this period nutritional coverage must be met starting from 270 days during pregnancy and the first 730 days after the baby is born. However, according to WHO, stunting prevention does

not only start at 1,000 HPK, but begins during adolescence by improving nutrition during adolescence.[9]

Prevention carried out in pregnant women can be done by improving the nutrition of pregnant women. Nutritional improvements that can be done during pregnancy are by giving blood tablets at least 90 tablets during pregnancy. In addition, mothers who experience Chronic Energy Deficiency (SEZ) need to get additional food to improve the nutrition of pregnant women. Improving breastfeeding practices is also one of the measures to prevent stunting. Early initiation of breastfeeding and exclusive breastfeeding for six months may provide protection against gastrointestinal infections.[10] This statement is supported by research conducted by Tiwari which states that children who are exclusively breastfed are likely to suffer from stunting lower than children who are not exclusively breastfed.

According to the results of Lestari's research (2014) risk factors for stunting include low family income, incidence of diarrhea, low levels of energy and protein adequacy, low birth weight, not exclusive breastfeeding , premature breastfeeding, poor parenting and genetic factors , one of which is parental height. Parental height is related to stunting in toddlers, especially maternal height. Mothers with a short height will have the possibility of giving birth to a short baby as well. Research conducted in Egypt found that babies born to mothers who have a height of less than 150 cm, are more at risk of growing into stunted children (Amin, 2014). Stunting is a nutritional problem that cannot only be seen from one causative factor, but seen from several interrelated causative factors.[11]

Research by Tula et al (2012) in Nepal shows that the main risk factor for stunting is improper parenting. Parenting is the ability of families to spend time, support and attention to children so that children grow and develop physically, mentally and socially (Sulistiyani, 2011). Parenting is divided into three, namely feeding practices, psychosocial stimulation and health care. Parenting is influenced by the level of knowledge and education of parents. A low level of education will affect parenting, due to limited knowledge about feeding toddlers. Feeding toddlers need Pay attention to creativity and diversity so that toddler nutrition can Fulfilled. If toddler nutrition is lacking, it will inhibit growth and the gradual development of the child.[12] Research conducted by Loya (2017:84-93) in Sumba Regency, East Nusa Tenggara, shows that,

Toddlers are vulnerable to nutritional problems if not supported by parenting the right one. Based on this description, it can be said that, the need for substances Child nutrition will be fulfilled if given good and adequate parenting. In addition to parenting, one of the risk factors for stunting that is no less important is hygiene-related behavior.[13]

Handwashing behavior is considered a trivial matter in society. Though hand washing is one of the behaviors that contribute to improve the degree of public health. Handwashing is the most important basic technique in the prevention and control of infectious diseases, because the hands of the body parts are most polluted with dirt and seeds of disease. Research conducted by Burton et al (in Purwandari et al, 2013) washing hands using soap is more effective for removing germs than washing hands using only running water. In addition, diarrhea is also caused by the low use of healthy latrines so that people still defecate in the open. In the study, it was also found that the use of latrines was related to diarrhea, people who did not use latrines 19.4% experienced diarrhea, compared to people who used latrines (Winarti and Suci, 2016).

Method

1. Research design

This study used a type of correlational descriptive research with *a cross-sectional* research design. With this study, the prevalence or incidence of stunting (dependent variable) will be obtained associated with the causative factor (independent variable).

2. Setting and samples

The population of this study consisted of parents and toddlers aged 24-59 months totaling 288 total toddlers where toddlers of stunted age. The sampling technique used in this study was purposive sampling with inclusion criteria for children aged 24-59 months registered in the study area; Recorded natives of the study area; Biological children; Children under five are recorded in the report of posyandu dipuskesmas; and Parents and toddlers are willing to be respondents. After calculating the number of samples, a sample of 74 respondents was obtained. This research was conducted at the Nutrition Poly Puskesmas Cilincing, North Jakarta.

3. Intervention (applies to experimental studies)

In this study, the variables used were independent variables consisting of several factors, namely Immunization History, PHBS, Exclusive Breastfeeding History,

Parenting Style, and Diarrhea History. While the dependent variable is the incidence of stunting.

4. Measurement and data collection

The instrument used to obtain data for each variable uses a questionnaire. Anthropometric Table of stunting measurement and MCH Book. All data obtained are categorized, in the Stunting variable into 1 *Stunting*: Z-score -3SD to < -2SD and 2 Normal: Z-score -2 SD to 2SD (Riskesdas, 2018); History of immunization to be 1 complete, if following the complete basic immunization of BCG-Measles and 2 incomplete if Not following one of the complete basic immunizations of BCG-Measles; PHBS variable 1. Both = 21-40 and 2. Less = 1-20; History of Exclusive Breastfeeding 1. Yes, if only breast milk is given for 6 months and 2. No, if any additional food is given to children aged <6 months; Parenting 1. Good = 18-35. and 2. Less = 1-17 ; History of Diarrhea 1. Do not experience diarrhea >3 times in 24 hours with the consistency of liquid stools.2. Diarrhea more than >3 times in 24 hours with the consistency (shape) of feces to liquid within the last 3 months.

5. Data analysis;

The data is categorized and then analyzed using a computer application with chi square test analysis.

Results

Frequency Distribution of Research Variables

Table 1. Frequency Distribution of Research Variables

Category	Frequency (f)	Percentage (%)
Status Stunting		
Stunting: Z-score-3SD to <-2SD	51	68.9%
Normal: Z-score -2 SD to 2 SD	23	31.1%
Total	**74**	**100%**
Immunization History		
Complete	42	56.8
Incomplete	32	43.2
Total	**74**	**100%**
Clean and Healthy Lifestyle		
Good	49	66.2
Less	25	33.8
Total	**74**	**100**
History of Exclusive Breastfeeding		
Yes (Exclusive)	57	77
No (not Exclusive)	17	23

Total	**74**	**100**
Parenting		
Good	36	48.6
Less	38	51.4
Total	**74**	**100**
History of diarrhea		
No diarrhea	29	39.2
Diarrhea	45	60.8
Total	**74**	**100**

Based on the table above, it was obtained that from 74 toddlers, there were 68.9% stunted toddlers with stunting (Zccore -3SD to <-2SD) and Normal Toddlers (Normal: Z-score - 2 SD to 2 SD) by 31.1%. Complete Immunization History of 42 toddlers (56.8%) and Incomplete as many as 32 toddlers (43.2%). A Healthy and Healthy Lifestyle in toddlers was obtained as many as 49 toddlers (66.2%) and Less Good as many as 25 toddlers (33.8%). History of Exclusive Breastfeeding is Yes (Exclusive) as many as 57 toddlers (77%) and No Exclusive Breastfeeding as much as 17 (23%). Parenting is Good as many as 36 toddlers (48.6%) and Less Good as many as 38 toddlers (51.4%). History of Diarrhea is toddlers who have a history of no diarrhea as many as 29 toddlers (39.2%) and have a history of diarrhea as many as 45 toddlers (60.8%).

The Relationship between Immunization History, Clean and Healthy Lifestyle, History of Exclusive Breastfeeding, Parenting and Diarrhea with the Incidence of Stunting in Toddlers 24-59 Months at Cilincing Health Center

Table 2. The Relationship Between Immunization History and Stunting Incidence

History Immunization	Stunting				Total		P value	OR
	Usual		Stunting					
	n	%	n	%	n	%	0.000	34.10
Complete	22	52.4	20	47.6	42	100		
Incomplete	1	3.1	31	96.9	32	100		
Total	23	31.1	51	68.9	74	100		

Results of the analysis of the relationship between the incidence of stunting with Immunization History obtained with stunting samples of 51 toddlers and normal 23 toddlers. That there are as many as 31 (96.9%) Short Toddlers with Incomplete Immunization History and 20 (47.6%) stunted toddlers with Complete Immunization History. Based on the results of the Chi-square test obtained a P value of 0.000, it can be concluded that there is a difference in the proportion of tunting events with Immunization History between Short and Normal Toddlers (there is a significant relationship between stunting and Immunization History). From the results of the analysis, an OR= 34.10 value

was obtained, meaning that the incidence of stunting with a history of immunization has a 34 times chance of stunting.

Table 3. The Relationship between PHBS and the Incidence of Stunting

PHBS	Stunting				Total		PValue	OR
	Usual Stunting							
	n	%	n	%	n	%		
Good	22	44.9	27	55.1	49	100	0.001	19.556
Less	1	4.0	24	96.0	25	100		
Total	23	31.1	51	68.9	74	100		

The results of the analysis of the relationship between the incidence of stunting and a Clean and Healthy Lifestyle (PHBS) were obtained with stunting samples of 51 toddlers and normal 23 toddlers. That there are as many as 27 (55.1%) Short Toddlers with good PHBS and 24 (96.0%) stunted toddlers with poor PHBS. Based on the results of the Chi-square test obtained a P value of 0.001, it can be concluded that there is a difference in the proportion of tunting events with PHBS between Short and Normal Toddlers (there is a significant relationship between stunting and PHBS). From the results of the analysis, an OR= 19,556 value was obtained, meaning that stunting events with a history of PHBS have a 19 times chance of stunting.

Table 4. The Relationship between History of Exclusive Breastfeeding and the Incidence of Stunting

History of Exclusive Breastfeeding	Stunting				Total		P Value
	Usual Stunting						
	n	%	n	%	n	%	
Yes (Exclusive)	21	36.8	36	63.2	57	100	0.96
No (Exclusive)	2	11.3	15	88.2	17	100	
Total	23	31.1	51	68.9	74	100	

Based on the results of the analysis of the relationship between the incidence of stunting in the Cilincing Sub-District Health Center and the history of exclusive breastfeeding, it was found that there were 36 (63.2) short toddlers with a history of exclusive breastfeeding and 21 (36.8%) normal toddlers with a history of exclusive breastfeeding.

The results of the statistical test obtained a value of p = 0.96 so it can be concluded that there is no difference in the proportion of tunting events with SI-Exclusive History between short and Normal (there is no significant relationship between stunting and ASI-Exclusive History).

Table 5. The Relationship between Parenting and the Incidence of Stunting

Parenting	Stunting				Total		P Value	OR
	Usual		Stunting					
	n	%	n	%	n	%	0.000	14.583
Good	20	55.6	16	44.4	36	100		
Less	3	7.9	35	92.1	38	100		
Total	23	31.1	51	68.9	74	100		

The results of the analysis of the relationship between the incidence of stunting and parenting were obtained with stunting samples of 51 toddlers and normal 23 toddlers. That there are as many as 35 (92.1%) stunting toddlers with poor parenting and 20 (55.6%) stunting toddlers with good parenting.

Based on the results of the Chi-square test obtained a P value of 0.000, it can be concluded that there is a difference in the proportion of tunting events with parenting between short and normal (there is a significant relationship between stunting and history of breastfeeding). From the results of the analysis, an OR= 14,583 value was obtained, meaning that the incidence of stunting with parenting has a 14 times chance of stunting.

Table 6. The Relationship Between History of Diarrhea and the Incidence of Stunting

History of diarrhea	Stunting				Total		P Value	OR
	Usual		Stunting					
	n	%	n	%	n	%		
No diarrhea	21	72.4	8	27.6	29	100	0.000	56.438
Diarrhea	2	4.4	43	95.6	45	100		
Total	23	31.1	51	68.9	74	100		

The results of the analysis of the relationship between the incidence of stunting and history of diarrhea were obtained with stunting samples of 51 toddlers and normal 23 toddlers. That there are as many as 43 (95.6%) stunted toddlers with a history of diarrhea and 8 (16.2%) stunted toddlers have never had diarrhea. Based on the results of the Chi-square test obtained a P value of 0.000, it can be concluded that there is a difference in the proportion of tunting events with a history of diarrhea between short and normal toddlers (there is a significant relationship between stunting and a history of diarrhea). From the results of the analysis, an OR= 56,483 value was obtained, meaning that the incidence of stunting with a history of diarrhea has a 56 times chance of stunting.

Discussion

The Relationship between Immunization History and Stunting in Toddlers at the

Cilincing District Health Center

Based on the results of the study above, it shows that respondents in stunted toddlers with Incomplete Immunization History by 96.9%, Complete Immunization History by 47.6% and Normal Toddlers with Incomplete Immunization History by 9.9% and Complete Immunization History by 52.4%. based on the results of the Chi-square TEST, a P Value of 0.000 was obtained, it can be concluded that there is a significant relationship between Immunization History and the incidence of stunting experienced by toddlers at the Cilincing District Health Center in 2024.

Immunization is one of the efforts to increase immunity and eradicate infectious diseases. The high infant and toddler mortality rate in Indonesia causes a decrease in the degree of public health, one of the efforts to overcome masalah.ini is the basic immunization program for infants and toddlers completely. Immunization works by stimulating antibodies against certain organisms, without causing a person to get sick first. The body's defense system then reacts into the vaccine that is introduced into the body, just like if microorganisms invade the body by forming antibodies. Then it will kill the vaccine like killing microorganisms that attack.

Berendsen (2016) The results of the study stated that it is not in line with the theory that vaccines can reduce the risk of death in children. Early administration of vaccines can reduce the incidence of stunting. If the vaccine is given too late, it can increase the incidence of stunting. In line with research conducted by Fajariyah & Hidajah (2020) which shows that immunization status has no relationship with the incidence of stunting in children aged 2-5 years in Indonesia. Immunization status is not related to the incidence of stunting in toddlers in Kedung Jati Village.

Nasrul conducted a study in 2016 and concluded that children who do not immunize are 1.6 times more at risk of stunting compared to children who immunize. This is in line with research conducted by Picauly in 2013 and concluded that children who do not immunize are 1.9 times more at risk for stunting compared to children who are immunized. Most respondents in the study did not receive complete immunization because of the lack of parental knowledge about the importance of immunization (Nasrul, 2015 &; Picauly, 2013). 1000 HPK is very important for the future of children because if there are parental mistakes in making decisions, the consequences felt by children can be felt for life, therefore parents need to be educated not to be late in vaccinating their children (Nasrul,

2015 &; Picauly, 2013).

Immunization in children is very important to increase their immune system. If not done, it will increase the risk of developing infectious diseases and cause decreased appetite and impaired absorption of nutrients which causes the intake of nutrients received is very small. Micro and macro substances at the age of the first 2 years of life are very important to support the growth of children. (Sutriyawan, 2020 & Syamsiah, 2020).

According to researchers, in this study the status of stunting toddlers with immunization history occurred a lot in toddlers with incomplete immunization history by 31 toddlers (96.9%). While toddlers with a Complete Immunization History, who have stunting toddlers are only 20 (47.6%). Immunization is one of the efforts to increase immunity, immunization stimulates antibodies against certain organisms, without causing a person to get sick first. So that it builds the immune system when one day the body is attacked by microganism that is the same as the vaccine, the antibodies will protect the body and prevent infection. With incomplete immunization can cause toddler immunity to become weak, making it easy to develop infectious diseases. Children who have infections if left unchecked can be at risk of becoming stunted.

The Relationship between PHBS (Clean and Healthy Lifestyle) and Stunting in Toddlers at the Cilincing District Health Center.

Based on the results of the study above, it shows that respondents in stunted toddlers who have a Clean and Healthy Lifestyle (PHBS) of 96.0% PHBS are not good, 55.1% of PHBS is good and Normal Toddlers who have PHBS of 4.0% are not good and good by 44.9%. based on the results of the Chi-square TEST, a P Value value of 0.001 was obtained, it can be concluded that there is a significant relationship between PHBS and the incidence of stunting experienced by toddlers at the Cilincing District Health Center in 2024.

Stunting is a complex nutritional problem because it can be affected by many things, one of which is the influence of the mother's condition. The condition of the mother has a great contribution to the health of the child, from the child in the womb (fetus) to toddlers. Also other factors that affect health indirectly (Purwanto &; Rahmad, 2020). Nutritional intake in toddlerhood and clean and healthy living behavior are closely related to nutritional knowledge of parents and families (Uliyanti et al., 2017). The role

of a mother in a family is very important because the mother is the driving force of behavior in the family. Event *stunting* It is directly influenced by several things, namely variables of nutritional intake, history of infection, as well as knowledge of maternal nutrition and nutritional levels. Meanwhile, clean and healthy living behavior (PHBS) affects the incidence *stunting* indirectly through a history of infectious diseases (Uliyanti et al., 2017).

Another study conducted in Waru Jaya Village, Parung District, Bogor Regency with the aim of determining the relationship between PHBS and the incidence *stunting* for toddlers in Waru Jaya Village, Parung District, Bogor Regency using the method *Cross sectional* It was found that there was a relationship between PHBS and events *stunting* in toddlers (Kurniawati & Puspowati, 2022).

Based on the results of the study, it can be interpreted from the 74 respondents studied, it was found that as many as 27 toddlers (55.1%) who had clean and healthy living behaviors (PHBS) both as respondents with the highest frequency. Behavior is a process of interweaving with the environment in aspects of actions, attitudes, and knowledge (Notoatmodjo, 2012). Behavior is influenced by various aspects, such as knowledge, level of education, beliefs, and fulfillment. Based on the results of research on respondents that one of the causes of stunting in toddlers with good PHBS is due to, among others, lack of consumption of fruits, vegetables and other physical activities. This causes the nutritional status of children to be lacking due to insufficient maternal knowledge of the importance of giving vegetables and fruits to toddlers. Moreover. The behavioral factor of mothers who do not always weigh toddlers every month is also a lack of supervision of the nutritional status of toddlers. Some of the things above make the implementation of PHBS in the family cannot be implemented perfectly.

Based on the results of the study, it can be interpreted from the 74 respondents studied, it was found that as many as 24 toddlers (96.0%) PHBS was not good. This result was found in the results of the questionnaire obtained that the majority of mothers do not know the points of PHBS indicators and who has a role in the implementation of PHBS. The level of knowledge of mothers also determines whether or not a mother absorbs and understands the nutritional knowledge obtained. This knowledge is needed so that someone, especially mothers, is more responsive to nutritional problems in the family. A mother who does not have a good knowledge of PHBS causes a deficiency. Preventive

measures for family health problems. Especially with regard to children. Mothers are the most important role holders in the process of caring for and caring for toddlers. Mothers can also be called role models in the family because housewives are at home every day.

The Relationship between Breastfeeding-Exclusive History and Stunting in Toddlers at the Cilincing District Health Center

Based on the results of the study above, it shows that respondents in stunted toddlers who breastfeed exclusively by 63.2%, not exclusively breastfed by 88.2% and normal toddlers who are exclusively breastfed by 36.8% and not exclusively breastfed by 11.8%. based on the results of the Chi-square TEST, a P Value of 0.96 was obtained, it can be concluded that there is no significant relationship between the History of Exclusive Breastfeeding and the incidence of stunting experienced by toddlers at the Cilincing District Health Center in 2024.

Stunting occurs starting from the fetus is still in the womb and only appears when the child is two years old. Stunting in toddlers needs special attention because it can hinder children's physical and mental development. Stunting is associated with an increased risk of illness and death as well as stunted growth of motor and mental abilities also has a risk of decreased intellectual ability, productivity, and an increased risk of degenerative diseases. Stunted children also tend to be more susceptible to infectious diseases, so they are at risk of experiencing a decrease in the quality of learning at school and at risk of more frequent absences, resulting in long-term economic losses for Indonesia (Kartikawati, 2011 in Indrawati, 2016).

According to the Unicef Framework, one of the factors causing stunting in toddlers is unbalanced food intake. Unbalanced food intake is included in exclusive breastfeeding that is not given for 6 months (Wiyogowati, 2012 in Fitri, 2018). Breast milk (breast milk) is milk produced by the mother and contains nutrients needed by the baby for the needs and development of the baby. Babies are only breastfed, without the addition of other liquids such as formula milk, lemon juice, honey, tea water, water and without the addition of solid foods such as bananas, papaya, milk porridge, biscuits, rice porridge and teams, for 6 months (Mufdlilah, 2017).

Based on the results of the study, it can be interpreted from the 74 respondents studied, it was found that 36 toddlers (63.2%) had a history of exclusive breastfeeding as

respondents with the highest frequency. The causes of exclusive breastfeeding failure are baby conditions such as low birthweight, congenital abnormalities, infections and others and maternal conditions, such as swollen breasts / abscesses, worry and lack of confidence, malnutrition and working mothers. In addition, inexperienced motherhood, parity, age, marital status, smoking, lack of family support, lack of knowledge, attitudes, and skills, sociocultural factors and health workers, low lactation education, and prenatal and hospital policies that do not support exclusive lactation or breastfeeding. All of which can contribute to breastfeeding failure and can lead to stunting in toddlers.

The Relationship between Parenting and Stunting in Toddlers at the Cilincing District Health Center

Based on the results of the study above, it shows that respondents in stunted toddlers who have good parenting by 44.4%, poor parenting by 92.1% and normal toddlers who have good parenting by 55.6% and poor parenting by 7.9%. based on the results of the Chi-square TEST, a P Value value of 0.000 was obtained, it can be concluded that there is a significant relationship between Parenting and the incidence of stunting experienced by toddlers at the Cilincing District Health Center in 2024.

Rahmawati's research is in line with Kasim (2019) which explains the relationship between parenting and the incidence of stunting. One of the risk factors for stunting is the parenting style of parents towards their children which is interpreted as a sense of affection and attention attached to children by caring, fostering, and educating children at an age where they cannot do everything themselves and need the help of others. Rahmawati conducted a study in 2020 and concluded that the risk factor for stunting is poor parenting because the child is not fulfilled nutritional and nutritional intake.

According to UNICEF, parenting is one of the factors causing stunting in addition to the quality of health services, environmental quality, and food security. Good parenting consists of early initiation of breastfeeding, exclusive breastfeeding and complementary foods, with these three things, children who are treated have a small risk of stunting (Ministry of Health R1, 2019). Parenting is influenced by knowledge where the knowledge is determined by information obtained from the environment, both mass media and social media, cadres, and other health workers. One of the efforts that has been made to reduce stunting is through strengthening the capacity of cadres at the community

level in conducting socialization efforts regarding stunting prevention to parents.

According to researchers, in this study the status of stunting toddlers with parenting style is more common in toddlers with poor parenting by 35 toddlers (95.1%). Meanwhile, of all respondents of mothers with good parenting, those with stunting toddlers only amounted to 16 (44.4%). However, poor parenting can be one of the factors in stunting caused by the lack of affection and attention attached to children by caring, fostering and educating because parents are busy working so they cannot pay attention to their children at home and provide nutritious food, can only provide fast food. So it is expected that parents will provide good care for children so that their growth is optimal. Therefore, the role of parents determines whether children grow stunting or not.

The Relationship Between History of Diarrhea and Stunting in Toddlers at the Cilincing District Health Center

Based on the results of the study above, it shows that respondents in stunted toddlers who have a history of diarrhea by 95.6%, do not have a history of diarrhea by 27.6% and normal toddlers who have a history of diarrhea by 4.4% and do not have a history of diarrhea by 72.4%. based on the results of the Chi-square TEST, a P Value of 0.000 was obtained, it can be concluded that there is a significant relationship between the History of Diarrhea and the incidence of stunting experienced by toddlers at the Cilincing District Health Center in 2024.

Stunting occurs as a result of chronic malnutrition in the first 1000 days of life. The cause of chronic malnutrition itself is not known with certainty, according to epidemiological studies stunting occurs due to less than optimal breastfeeding, MPASI, micronutrient deficiencies and repeated infections (Predergast, 2014). Infectious diseases / infectious diseases are diseases caused by pathogens or toxin products transmitted from infected people, animals or objects to the appropriate host, either directly or indirectly (Seventer, 2017). Infection is one of the health problems whose prevalence is still high with morbidity and mortality rates that are also still high, according to data from the Indonesian Ministry of Health (2020)

Diarrhea is a risk factor for stunting in children which is a health problem in Indonesia. Diarrhea is caused by various reasons such as infection *Shigella* Sp. *Salmonella, Campylobacter,* and *Escherichia coli*. In addition, the trigger factors for

diarrhea are intolerance to substances in foods such as lactose and fructose, allergies to a food, side effects of drugs, geography of an area, level of sanitation and hygiene (Firmanyah, 2021).

Children aged 2 years more often experience diarrhea because the intestines are more sensitive to substances that enter the food. Diarrhea is an infectious disease characterized by changes in the shape of the stool that becomes soft, the frequency of bowel movements increases, and is accompanied by vomiting, resulting in lack of fluid in the patient's body or severe dehydration. Finally, if you do not get help immediately, it can lead to serious health problems and even death (Torlesse, 2016 & Bayu, 2014).

Desyanti (2017) The results of the study concluded that a history of diarrhea has a risk of 3,619 times greater incidence of stunting in children under five due to hygiene practices, parenting, microorganisms in water, and other chemicals [15]. This research is in line with the research of Aguayo &; Zul Fikar which explains that children can get diarrhea due to microorganisms in water and other chemicals and cause stunting due to fluid loss and a number of nutrients that are essential for the body (Aguayo, 2016 & zul fikar, 2019).

According to researchers, in this study the status of stunting toddlers with a history of diarrhea was more common in toddlers who had a history of diarrhea as many as 43 toddlers (95.6%) and did not have a history of diarrhea 8 toddlers (27.6%). This study found that unfavorable environmental conditions allow various diseases including diarrhea and infectious diseases. Environmental sanitation is closely related to the availability of clean water, the availability of latrines, other types of houses and the cleanliness of tableware in each family. The more available clean water for daily needs, the less risk of children getting infections, malnutrition. Infectious diseases and diarrhea cause the metabolism of nutrients in the body to be disrupted so that it can cause malnutrition during growth.

Conclusion

Based on the results of data analysis from the discussion of factors such as History of Exclusive Breastfeeding, Clean and Healthy Living Behavior (PHBS), Parenting, History of Immunization and History of Diarrhea as factors of stunting events, it can be concluded that toddlers in the Cilincing District Health Center who are stunted (68.9%),

PHBS is not good (96.0%), History of Exclusive Non-Breastfeeding (88.2%), Poor Parenting (92.1) and who have a History of Diarrhea (95.6%). There is a significant relationship between Immunization History (0.000), Clean and Healthy Living Behavior (PHBS) (0.001), Parenting Style (0.000) and History of Diarrhea (0.000) with the incidence of stunting in Cilincing District Health Center in 2024. There is no significant relationship with the history of exclusive breastfeeding not with the incidence of stunting at the Cilincing District Health Center in 2024 with a P value of 0.96. The greatest variable opportunity based on the results of the questionnaire is History of Diarrhea with a value of OR = 56,483. It is hoped that Health Workers, especially in Puskesmas, can Conduct educational activities to increase the knowledge of mothers or prospective mothers regarding the diversity / variety of foods, especially food sources of animal protein by holding cooking activities together and teaching parents to eat portions for toddlers that eating in toddlers in principle with balanced nutrition is not full and provide education to parents of toddlers to anticipate diarrhea in toddlers so that they can prevent diarrhea and do not have an impact on stunting with complete immunization, clean and healthy living behavior well, good parenting

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